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ABSTRACT

A study analyzed data on the nature and scope of vocational education programs in Arizona in order to supply information on the pool of trained workers produced annually by vocational education programs. The study examined data from secondary schools, community colleges, and proprietary schools to gain information about the numbers of people enrolled in vocational programs across the state. The study found that in 1981-82, more than 156,000 people were preparing for wage-earning occupations in secondary, postsecondary, and proprietary schools. In addition, more than 68,000 high school students were in vocational exploratory classes during the same period. The following recommendations for further study and improvement in existing vocational enrollment system were made: (1) a system to determine primary program goals of community college students should be developed and the data included in the vocational education data system; (2) full-time student equivalency should be collected by program at the community college level; (3) specific program definitions and codes should be adopted in order to establish consistent standardized program coding; and (4) all enrollments should be reported in a code that clearly specifies the program title. Implementation of these recommendations will allow the existing system to provide the data needed for planning. (Sixteen references and eight tables of enrollment data are appended.) (KC)

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ANALYSIS OF DATA ON THE NATURE AND SCOPE OF VOCATIONAL EDUCATION PROGRAMS IN ARIZONA

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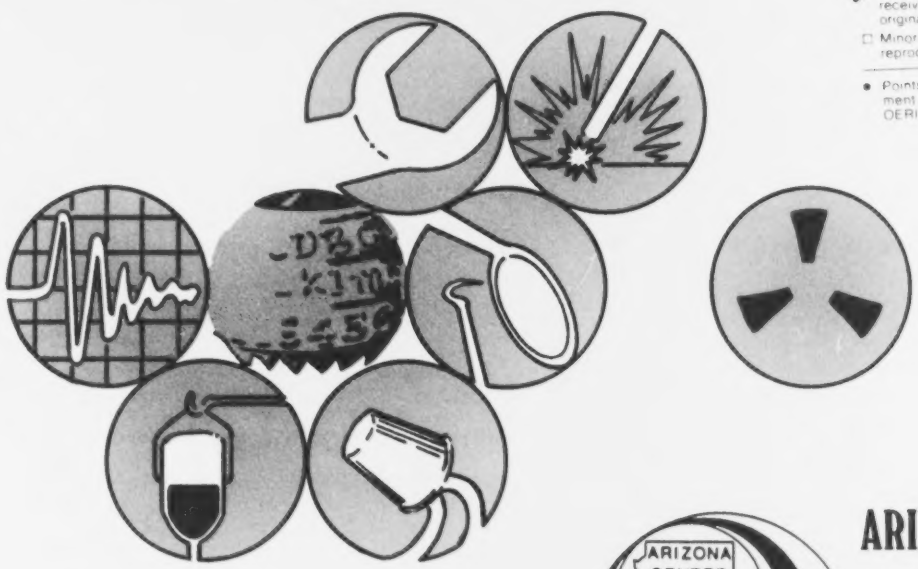

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ANALYSIS OF DATA ON THE NATURE AND SCOPE OF VOCATIONAL EDUCATION PROGRAMS IN ARIZONA

by

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FOREWORD

Project 1995

Project 1995 was funded in March, 1983, to provide direction for Vocational Education in Arizona through the year 1995. The study had seven objectives which resulted in the following seven monographs:

- Analysis of Arizona Labor Market Demand Data for Vocational Education Planning
- Analysis of Vocational Education Follow-up Procedures
- Analysis of Data on the Nature and Scope of Vocational Education Programs in Arizona
- Articulation of Vocational Education Programs in Arizona
- Analysis of State Funding Alternatives for Vocational Education
- A Model for Determining Vocational Education Funding Priorities
- A Plan to Improve Arizona Vocational Education Data Systems

Although each monograph covers a specific area of study, there are relationships among them and all provide recommendations for improvements in Arizona's vocational education data systems.

A number of recommendations for short-term and long-range modifications in the data systems have been made. As these changes are implemented, more valid and reliable data will be available to plan vocational education in the future.

Acknowledgements

We wish to thank the members of Task Force 1995 for their support and guidance throughout the duration of the project. We acknowledge the efforts of the Technical Review Committee members for their time in providing direction and in reviewing the monograph. The memberships of the Project 1995 Task Force and the Technical Review Committee are presented in Appendix I. We also appreciate the efforts of Karen Harned and Mary Snell for the original collection of data.

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EXECUTIVE SUMMARY

This monograph presents the results of an analysis of data on the nature and scope of vocational education programs in Arizona. The purpose of this study was to supply information on the pool of trained workers produced annually by vocational education programs. In 1981-82, over 156,000 people were preparing for wage-earning occupations in secondary, post-secondary, and proprietary schools. In addition, over 68,000 high school students were in vocational exploratory classes during the same period.

The study examined data from secondary schools, community colleges, and proprietary schools to gain information about the numbers of people enrolled in vocational programs across the State. Recommendations for further study and improvement in the existing vocational enrollment systems were made.

The recommendations for improvement to the existing data systems included:

- A system to determine primary program goals of community college students be developed and the data be included in the Vocational Education Data System.

- Full-time student equivalency (F.T.S.E.) be collected by program at the community college level.

- Specific program definitions and codes be adopted in order to establish consistent, standardized program coding.

- All enrollments be reported in a code that clearly specifies the program title; reporting in the "Other" category should be eliminated.

The existing vocational education enrollment systems are valid. Improved definition of programs, completers, and reasons for enrolling in vocational programs will allow the existing system to provide the data needed for planning.

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Chapter 1

INTRODUCTION

This study on the nature and scope of vocational education in Arizona is intended to supply information on the pool of trained workers that are expected to make up Arizona's labor supply. In 1981-82, over 156,000 people were preparing for wage-earning occupations in secondary, post-secondary, and proprietary school vocational education programs. In addition, over 68,000 high school students were in vocational exploratory classes during the same period.

One of the many goals of vocational programs is to prepare people for employment; that goal can best be met by planning programs to meet labor market needs. In addition to vocational preparation, other goals of vocational education at the secondary level include occupational preparation and preparation for placement in post-secondary programs. The importance of obtaining a comprehensive assessment of the types of programs that are currently offered and their respective enrollments is critical to building a planning base from which decisions can be made.

This study examines data from secondary schools, post-secondary schools and proprietary schools to gain information about the numbers of people enrolled in vocational programs across the State. Included in this report are a review of the related literature, an overview of the existing enrollment reporting systems, the methodology, the limitations, and the findings. Recommendations for further study and for improvement in the existing vocational education enrollment systems are in the last Chapter.

Chapter 2

REVIEW OF RELATED LITERATURE

Obtaining reliable and useful information on vocational program participation and completion depends on an understanding of the factors that affect data that is collected. Such an understanding can lead to the development of data collection systems that produce accurate and reliable information for use in planning and evaluation of vocational education programs. The review of the literature focused on the major problem in vocational education reporting--determining which students to count and in which programs to count them.

Defining "the vocational student" is a problem in vocational education data collection and interpretation Sheldon (1983) points out that the major shortcoming of the VEDS data is that "it tries to apply a universal criterion to institutions and individuals that are not comparable." He says that the differences between students who have just completed high school and senior citizens who enroll in community colleges are too great to be forced into the same data collection system. He believes this practice, especially when data are aggregated across schools, states, and the nation, leads to distorted information.

Most authors agree that the first step is to determine the primary educational goal of the student. Although on the surface separating vocational students from nonvocational students appears to be simply a matter of coding, several authors point out that many variables must be considered in the process.

Some studies have used self-declaration of intent as the basis for making the determination of the student's primary goal but many are critical of this practice because it produces unreliable results. Gold and Morris (1977) feel that a community college student's major will be more accurately identified by an examination of his/her program. Nonetheless, they suggest using a broad "statement of intention" at the time of registration. Their suggested format gives students the following options:

- Pre-employment training
- Preparation for transfer
- Inservice training
- General education

A more sophisticated method for determining student majors accurately and defining programs and the courses within them is the California Community Colleges' Student Accountability Model (SAM). Morris and others (1981) explain the system in which occupational courses are classified by assigning priority letters and major code numbers; a student's major is then defined according to the occupational

courses in which he/she enrolls. Classifications of courses are done using a matrix; by answering the questions posed in each block it is possible to categorize classes as "A", "B", "C", "D", or "E" according to strict guidelines. Then based on the classifications of the courses they are taking, students are categorized as Occupational Major Class 1, Occupational Major Class 2, Occupational Major Class 3, or Nonoccupational Major. This system leads to an unduplicated count of students and is a way of determining "types" of students using data other than self-declaration.

Another consideration is that enrollment patterns and the stability of them varies considerably among students. For example, Knoell (1982) developed three community college student prototypes: the transfer prototype; the vocational prototype and the special interest prototype. Within the vocational category, which accounts for 35.5% of all community college students Knoell identifies five additional categories:

- Program Completer (5.7%)
- Job Seeker (13.5%)
- Job Upgrader (12.3%)
- Career Changer (3.3%)
- License Maintainer (0.7%)

A similar study by Sheldon (1981) examined patterns of participation for secondary vocational students using the following classifications:

- Concentrators (14%)
- Limited Concentrators (23%)
- Concentrator/Explorers (13%)
- Explorers (2%)
- Incidental/Personal (48%)

In placing students in the groups, he looked at the number of credits received in vocational courses, number of program areas in which specialty was pursued, number of vocational credits in the program area that were determined to be supportive of the specialty area, a scaled measure of whether that specialty was pursued in the 11th or 12th grade, and the number of years in which the specialty was taken.

It is interesting to note that the secondary groups tend toward more broadly based goals than the community college students who fall into rather specific job-oriented patterns. These factors may influence the decision about who should be considered a "completer" or a "leaver." The traditional definitions have usually been limited; a "completer" is a person who completes a vocational program and a "leaver" is a person who does not. The assumption seems to be that every student who enrolls in a vocational class desires to complete a vocational program.

The reasons students give for leaving college programs provide insight into the problems of defining "completers" and "leavers." The Illinois Statewide Occupational Follow-up(1980) surveyed full-time and

part-time students who had left community colleges. The reasons given by the students for leaving are (in rank order):

1. Specified reasons not listed.
2. Took all courses originally planned.
3. Job responsibilities too great.
4. Financially unable to attend.
5. Changed career goals.
6. Transferred to another school.
7. Obtained full-time employment.
8. Family responsibilities interfere.
9. Academic difficulty.
10. Transportation problems to school.

Hunter and Sheldon (1979) also examined attrition patterns of community college students. The major reasons students gave for leaving school were: job conflict, disliked class content, assignments too heavy, indefinite motivation, underprepared for class, job preference over school, disliked instructor, and class switching.

Interestingly, although many students leave college, and presumably vocational programs, to take a job, they are considered "leavers" even though they may be working in the area in which they received training. Many students have goals other than "completion" in the sense that it means receiving a degree or a certificate. For many, "completing" means obtaining enough skill to be able to get a job. When they have met their goal, they have "completed."

The literature reviewed makes it clear that successful vocational education reporting must consider a variety of types of students and their reasons for vocational program participation. Definitions for "enrollment in a vocational program," "completer," and "leaver" must take into account the varying goals and patterns of participation of secondary and post-secondary students. Assignment into the various groups must be based on these factors if data gathered is to have meaning in planning vocational education programs.

Chapter 3

OVERVIEW OF THE VOCATIONAL ENROLLMENT DATA SYSTEM (VEDS)

The Vocational Education Data System (VEDS) is the major vocational enrollment reporting system in Arizona for the Secondary and Post-secondary schools. The system was designed and is administered by the Arizona Department of Education (ADE), under the auspices of the State Board of Vocational/Technical Education. The information is collected and compiled by the ADE and submitted to the National Center for Educational Statistics in December of each year.

Data reported are "unduplicated" counts obtained by comparing student identification numbers for a given fiscal year for each reporting date and removing the duplicates. Thus, the unduplicated count represents an actual student assigned to one program area for the yearly report.

Collection of data through "duplicated" counts is necessary to ensure accurate and complete reporting. In addition, duplicated counts more accurately reflect program cost.

Secondary

Data for the Secondary level VEDS is reported by the high schools twice yearly on the 40th day and the 120th day. Information is collected on Vocational Education Course Enrollment forms supplied by the ADE. The following items are reported:

Course Data

School Code
Course Code
Course Title
Teacher Certification Number
Term
Period
Minutes per Week
ADE Funding Codes
Contact Person
Phone

Student Data

Student Name

Student Identification Number
Action (Admission, Withdrawal, Corrections, Deletions)
Grade
Sex
Ethnic
VEDS Special Needs (Handicapped, Limited English Speaking, Disadvantaged)
District of Residence

In addition to the above, the 1981-82 and 1982-83 forms included a Program Code for each student. Use of this item has posed problems and it has been eliminated on the reporting forms for 1983-84. In 1981-82, the Program Codes were selected by the students. This approach led to students selecting programs that were not offered in the school. For example, if a student selected Dental Hygiene/Associate Degree, as a program goal, later composite reporting by program would show the student in a program that was not offered in the school he/she was attending.

In 1982-83, schools were told to assign students to a program that the school was offering. The methods used varied, especially when the student was taking, for example, two vocational classes in different areas like business and agriculture. Most schools developed some guidelines for program assignment but they were not consistent across all schools.

For 1983-84, high schools will report only course enrollment. The ADE will make the program assignment. No "Other" designations will be used for program coding. Tentative plans are to use a hierarchy which will assign students to programs based on the courses they take.

Another improvement in the Secondary VEDS will be the conversion from Office of Education (OE) codes to Classification of Instructional Program (CIP) codes with the 1984-85 reporting. The CIP codes will be used by the ADE in the federal VEDS report beginning this year, but assignment of the CIP codes will be done at the state level.

Post-Secondary

The Post-Secondary VEDS is also collected by the ADE from computer tapes submitted by the individual community college districts. Three tapes are submitted each fiscal year--one for the 45th day count for the first semester, one for the 45th day count for the second semester, and one for open-entry/open-exit, short-term and/or summer courses. The tape format is supplied to the community colleges by the ADE and includes the following items:

School Code
Class Code

Credit Hours
Student Identification Number
Teacher Identification Number
Teacher's Name
Grade Level
Sex
Ethnic
Semester
Student's Name
Student's Address (Including City, State, and Zip)
Student-Handicapped
Student-Limited English Speaking
Student-Disadvantaged

The State Board of Directors for Community Colleges is in the process of making the transition from using OE codes to using the CIP codes for reporting individual courses at the post-secondary level. Pima County Community College District is currently obtaining information from students on their applications for admission which will be useful in vocational education reporting. Students are asked to indicate:

Reason for Enrollment
1. University Transfer
2. Direct Employment
3. Employment Skills Upgrade
4. Special Interest
5. Other

Educational Program of Interest Code
(Lists of individual programs are provided for each)
1. Programs for University Transfer
2. Programs for Direct Employment
3. Other Programs

Although these items are not collected at all colleges, it is important to recognize the positive direction the collection of this information represents.

The VEDS reporting is a requirement for the acceptance by the state of federal funds for vocational education. The Arizona Revised Statutes 15-784 provides:

A. The state assents to the provisions and accepts the benefits of the Vocational Education Act of 1971, as amended, and the Vocational Education Act of 1963, as amended, and reorganized by the Education Amendments of 1976.

B. The State Board of Education is the State Board of Vocational Education for the purposes of the acts. The State Treasurer is designated custodian for vocational education for the purposes of the

acts. He shall receive and provide for the custody and disbursement of all monies paid to the State for the purposes of vocational education.

C. There is appropriated from the general fund of the State sufficient monies to meet the requirements of the acts of Congress.

D. The State Board shall distribute to the State Board of Directors for Community Colleges at least 15 percent of the monies received in subsection A of this section. The State Board of Directors for Community Colleges has sole responsibility for the administration and supervision of the administration of community college vocational and technical programs for the purposes of the acts and use of the monies received as provided in this section.

Therefore, the State Board of Education actually receives the funds and must meet the compliance requirement of VEDS reporting. The statute, however, provides that the State Board distribute 15 percent of the funds to the State Board of Directors of Community Colleges who have "sole responsibility for the administration and supervision of the administration of...programs for the purpose of the acts and use of the monies received..." No provision is made for the State Community College Board to accept the responsibility for VEDS reporting for community colleges although they receive the VEA federal funds; the reporting requirement is left with the State Board of Education.

Arizona Revised Statutes, 15-203A, Powers and Duties of the State Board of Education, states:

> In conjunction with the state board of directors for community colleges and in cooperation with the school districts and community college districts develop and conduct a yearly follow-up survey of students and their employers regarding all vocational technical education programs which the school districts and community colleges offer. The board shall provide a copy of the survey results to all school district and community college districts. The report shall at least indicate by instructional program and respective school district or community college district the number of graduating students who took vocational and technical education, the number of students enrolled in vocational and technical education but who did not complete a program and the number employed within a six-month time period for at least the equivalent of two-months' full-time employment within the area in which the student received training.

This section requires the State Board of Vocational Education to gather information from follow-up community college and high school vocational program graduates as well as from those who do not complete the program and requires them to supply copies to the school districts and the community college districts. Arizona Revised Statutes, 15-1425, General Administrative Powers of the State Board (Community Colleges), states:

In conjunction with the state board for vocational technical education develop and conduct a yearly follow-up survey of students and their employers as provided in 15-203, subsection A, paragraph 35.

Therefore, although the follow-up is to be conducted as a joint effort between the State Board of Education and the State Board of Directors of the Community Colleges, the responsibility actually rests with the State Board of Education because they must provide copies of the completed study to the districts. In addition, they must meet the compliance requirements for acceptance of the federal vocational education funds. It appears that the State Board of Education has the responsibility but not the authority necessary to accomplish this task at the community college level. Administration of community colleges and the community college vocational federal funds are the sole responsibility of the State Community College Board.

That fact seems to have led to difficulty on the part of the Department of Education in obtaining complete information from the community colleges in time for inclusion in the VEDS report for 1982-83. As of the July 15 deadline for reporting open-entry/open-exit, short-term, and summer courses, data from some community colleges had not been received. Therefore, the report was compiled without these figures so that the Department of Education could meet the federal reporting deadline. Data is not available to indicate how many enrollments were not counted. However, State Community College Board staff estimate the number to be about 10,000. That number would account for the decline of about 10,000 in the number of students reported in 1982-83 from the number reported in 1981-82.

Chapter 4

METHODS OF DATA COLLECTION AND ANALYSIS

The methodology employed in this study was to locate and obtain the most recent vocational program enrollment and completion data for secondary (high schools), post-secondary (community colleges), and proprietary (private) schools who were providing vocational education. Data was to provide unduplicated counts of the numbers of students who enrolled and completed by program. This information was entered into a computer and aggregated in order to produce totals which represent all enrollments and completions in Arizona by program. Subsequently, all data was analyzed in order to determine how many people were being trained in the various programs by the three program delivery systems.

Secondary (High Schools)

Enrollment/completion data by program was obtained from the Arizona Department of Education Vocational Enrollment Data System (VEDS) Reports for 1981-82 and 1982-83. The VEDS information is submitted to the Department of Education by most secondary schools with vocational programs. This Report is an unduplicated count and was the most current information available. Arizona Department of Education personnel believe these Reports are the most reliable unduplicated counts available. Information taken from them was total enrollments and total completions by vocational program for preparatory and total enrollment in exploratory vocational classes by categorical area.

The VEDS preparatory vocational program enrollment for 1981-83 and program completion data for 1981-82 (only available data) was entered into a computer database by OE code and by year. This database made it possible to rank programs according to enrollments and completions. By matching OE codes to a list of program labels, tables were prepared that contained program names. Vocational exploratory data was transferred to a table and calculations were done to determine what percentage of total high school enrollment was in vocational education.

Post-Secondary (Community Colleges)

Preliminary research to determine the most reliable and accurate data for this study included surveying the occupational deans at the fifteen publicly-funded community colleges to obtain the number of full-time student equivalents by program, an attempt to obtain the number of

full-time student equivalents by program from an Arizona Department of Education report on community colleges classes, and obtaining a copy of the Post-Secondary VEDS reports for 1981-82 and 1982-83 from the Arizona Department of Education. The latter was selected for use in this study because it was the consensus of Arizona Department of Education and State Board of Community Colleges personnel that the VEDS provided the most accurate unduplicated enrollment figures available. Information taken from them was total vocational enrollment and the number of vocational certificates and/or degrees awarded by program.

Post-Secondary VEDS data was analyzed in the same way as the Secondary preparatory enrollment and completion data. The VEDS preparatory vocational program enrollment for 1981-83 and program completion data for 1981-82 (only available data) was entered into a computer data base by OE code and by year. This database made it possible to rank programs according to enrollments and completions. By matching OE codes to a list of program labels, tables were prepared that contained program names.

Proprietary (Private Schools)

Obtaining vocational program enrollment and completion information for Arizona's proprietary schools included checking several possible data sources to locate the most accurate and reliable available information.

- The State Board of Private and Business Schools provided a single sheet summary of figures from 1976-1981. Breakouts by program were not available. Staff of the State Board of Private and Business Schools emphasized the the reliability of the information was questionable because enrollment reporting was voluntary, involved no accounting system, and included figures based on varying time frames. Since the data used to compile the report was not available, it was not possible to break the totals provided into enrollment and completion by program.

- The Arizona Commission on Post-Secondary Education provided summary information from the results of their 1982 Survey of Post-Secondary Educational Institutions in Arizona and allowed examination of the completed surveys.

- The Arizona Private School Association also provided a directory of their members. By cross-referencing their directory with the list of respondents to the 1982 Post-Secondary Survey, it was possible to determine that almost all their members were in the Survey's database. The four members who had not completed the survey were contacted by phone; three said they were not in operation at the time and the other contact was out of state.

- The Arizona State Occupational Information Coordinating Committee (ASOICC) provided their Report #83-4, 1982 Arizona Proprietary School Enrollments and Completions. This report includes enrollment and completions for the period of August 1, 1981, to April 15, 1982. This Report was used for this study because it was the only data available which reported unduplicated counts by program.

The Report used the data from the Arizona Commission on Post-Secondary Education and included enrollments for Proprietary schools and the following publicly-funded organizations: Center for Employment and Training, Maricopa Skill Center, Phoenix Job Corps Center, Phoenix Opportunities Industrialization Center, Pima Community College Skill Center, Tucson Job Corps Center, and the Gila River Career Center.

Enrollments for the following publicly-funded organizations that contract their training to private schools are also included in the ASOICC Report: Eastern Comprehensive Employment and Training Center, Phoenix Urban League, SER Jobs for Progress (Glendale, Tucson, Yuma), Tucson Indian Center, and the Tucson Urban League.

Figures include only those programs judged to be vocational; programs in the areas of self-improvement, self-motivation, time management, speed reading, psychocybernetics, dancing, art, music, acting, and nonprofessional modeling were excluded. Also excluded were programs beyond the two-year degree, programs of less than 16 contact hours, schools for test review, out-of-state correspondence schools, and programs offered by colleges and universities.

It is, however, important to note that the Report does not cover the entire fiscal year period. It covers only an 8-1/2 month time period while Secondary and Post-Secondary data used in this study represents a 12-month period.

The data on Proprietary school enrollments and completions from the 1982 Arizona Proprietary School Enrollments and Completions Report was entered into the computer database in the same way as for the Secondary and Post-Secondary VEDS data. An additional item in the ASOICC Report separated part-time and full-time students; it was also entered into the database. Programs were ranked according to enrollment and completions and the percentage of part-time students was calculated.

Total Enrollment

The total 1981-82 database was used to produce a rank ordering of all enrollments in vocational preparatory programs in secondary, post-secondary, and proprietary schools. The 1981-82 data was used for total comparison because it was the only year for which data on all three providers was available.

The highest enrollment programs in 1981-82 from each delivery system and from the aggregated total enrollment were plotted on a matrix. The top 20% of the rank-ordered programs were selected from each service provider for this analysis.

Chapter 5

FINDINGS

The major finding of this study was that data analyzed, for the most part, were too inconsistent for use in making solid conclusions about the labor supply being trained in Arizona. General observations could be made, however, given an understanding of the limitations imposed by the data examined. This Chapter outlines the limitations and explains the results of the analyses conducted. Tables are contained in the Appendix.

Limitations Imposed by the Data

Unfortunately, the data obtained for each of the three providers imposed certain limitations that affected analyses and interpretation. Taken as a group, these limitations preclude solid conclusions throughout this study. Nonetheless, this data does provide information which could be useful in vocational education planning if the limitations are considered.

The major limitation in the Secondary data was that student choice was used to determine program in 1981-82. The following year schools assigned the program codes; consequently, comparisons between the two years cannot be considered valid.

Also, at the Secondary level, the completion rate for the program "Other" was 664%. Problems in determining high school programs of students for follow-up purposes may have led to many students in the Other category for the follow-up who were actually in specific program areas when they were enrolled.

Another limitation was that Proprietary School information was available only for 1981-82. Therefore, total comparisons were done using 1981-82 information from all three delivery systems. Total analyses using more current information would have been more useful in examination of the nature and scope of vocational education. Rank-ordering of Secondary and Post-Secondary, however, was done using the 1982-83 fiscal year because it was the most current information available.

An additional problem was that the Proprietary school data did not cover the same length of time as the Secondary and Post-Secondary. The Proprietary school information was for an 8-1/2 month time period; data from other providers was for a 12-month period. That fact makes comparisons of numbers of enrollments and completions in the Proprietary schools to other providers questionable. It is likely that the numbers

for Proprietary schools would be higher if data for a full 12 months were available.

In the Post-Secondary data, the problem of some missing cases in 1982-83 that was discussed in Chapter 3 (see page 10) limited comparisons between the two years studied.

Also illustrated by the data was that many Post-Secondary students do not complete programs in which they are enrolled. One consideration is that not all certificates are reported. In addition, the assumption that all vocational students are pursuing a certificate is not valid. In order to determine how many newly trained people will enter the labor market upon completion of community college programs, it is necessary to know why students are enrolled in the programs. Student goals may be upgrade training, self-enrichment, or others. When projecting the labor supply being trained for entry into the job market, why a student is enrolled becomes critical to obtaining good data for planning for the needs of business and industry.

Since the time frame of the study dictated that existing data be used, the study could not answer the question originally posed because of the number of data limitations.

Secondary

The following table, Comparison of Secondary Vocational to Total Enrollments, displays 1981-83 vocational enrollment in Arizona's high schools. In 1981-82 68,740 (42%) were enrolled in exploratory vocational classes and 34,933 (22%) were enrolled in vocational preparatory (for wage-earning) programs. Hence, 64% of all students in high school were enrolled in exploratory or preparatory vocational education classes or programs in 1981-82. In 1982-83 of the 163,552 students in high school, 78,676 (48%) were in exploratory classes and 29,597 (18%) were in preparatory programs; the total percentage of all high school students enrolled in vocational education in 1982-83 was 66%. Thus, between the two years, the percentage of total students who were involved in vocational education showed a 2% growth.

The overall 2% growth was accounted for by an increase in the number of students enrolled in exploratory not preparatory programs; the percentage in preparatory decreased by 4% over the 2 years. Although exploratory classes are ordinarily taken in the 9th and 10th grades and preparatory programs in the 11th and 12th grades, the increase in exploratory enrollment might not positively impact the number in preparatory programs until 1983-84 if most of the increase in exploratory enrollment was in 9th grade classes.

Since between 40-50% of all students participate in exploratory vocational education and only 20% in preparatory, between 20-30% of the

exploratory students do not go on to pursue vocational programs. The curriculum delivered in exploratory includes many classes in homemaking, industrial arts, and business which may be of interest to students whose career goals are not directly related to vocational program completion. Examples are classes in clothing, nutrition and foods, auto mechanics, woodworking, and typing.

COMPARISON OF SECONDARY VOCATIONAL TO TOTAL HIGH SCHOOL ENROLLMENTS

OCCUPATIONAL AREA	VOCATIONAL ENROLLMENT		PERCENTAGE OF TOTAL HIGH SCHOOL ENROLLMENT	
	81/82	82/83	81/82	82/83
Exploratory (Includes Consumer and Homemaking)	68,740	78,676	42%	48%
Preparatory (Wage-earning)	34,933	29,597	22%	18%
TOTAL VOCATIONAL ENROLLMENT	103,673	108,273	64%	66%

Note: Total high school enrollments from SUPERINTENDENT'S ANNUAL REPORT: 1981-82, 162,163; 1982-83, 163,552.

The next table, Secondary Vocational Preparatory Program Enrollments (Appendix A), ranks high school vocational program enrollments from highest to lowest using 1982-83 enrollment figures. It should be noted that 1981-82 programs were chosen by the student and 1982-83 programs were assigned by the school. This fact may affect comparisons between the two years.

A total of 79 programs in 1982-83 showed enrollment of one or more, a decrease of ten programs from the 1981-82 total of 88 programs. This decrease might be accounted for by a change in coding of programs, elimination of some programs, and/or a change in student enrollment patterns. The total number of students in 1981-82 was 34,933 and 1982-83 was 29,597, a decrease of 5,336 students.

Of the ten highest enrollment programs in 1982-83, four are from "Other" categories: Other Office Occupations, Other Distributive Education, Other Trade and Industrial, and Other Occupational Preparation for Homemaking. This fact might indicate that programs were not well-defined which resulted in many programs being coded as "Other." The remaining programs in the top ten were Typing and Related Occupations, Accounting and Computing Occupations, Steno/Secretarial and

Related, Auto Mechanics, Filing/Office Machines/General Business, and Programmers. Programs in the business area had the largest enrollments at the secondary level.

Of the 79 programs in 1982-83, 11 had enrollments of over 1000. Forty-one (41) had enrollments of more than 100. The top 10 programs accounted for 65% of all enrollments. The 41 programs with enrollments over 100 accounted for 96% of the vocational preparatory enrollments. The remaining 38 programs accounted for only 4% of the overall enrollment.

Secondary Vocational Preparatory Program Completions (Appendix B) is ranked on number of 1981-82 Completers and illustrates a disparity in the data, possibly due to problems in the coding of programs. The top program was Other which showed a completion rate of 664%. Observations about which programs had the highest completion rates or about the rates of individual programs should be made cautiously, if at all, because of the lack of consistency in the data.

Since 1981-82 program assignment was based on student choice rather than actual program participation, the relationship of enrollments to completions may have little meaning. The additional problem in coding high school students for follow-up purposes may also have created disparities in comparisons of enrollments to completions by individual program. Given that changes in coding accounted for some inconsistency in the individual program completions, the overall completion rate would not be affected. That rate was 54% with a total of 18,919 high school students completing vocational preparatory programs in 1981-82.

As noted in Chapter 2, the "Other" codes were eliminated for 1983-84 VEDS reporting. This change to specific program codes will improve the quality of the data that is collected and allow for more accurate analysis and better information for planning and decision-making purposes in the future.

Post-Secondary

The table, Post-Secondary Vocational Program Enrollments (Appendix C) displays community college vocational preparatory enrollments from 1981-83 ranked on 1982-83 enrollment figures. In 1981-82 a total of 100 programs had an enrollment of 1 or more; in 1982-83 there were 102 programs. The two highest enrollment programs are in the "Other" category; Other Business Data Processing and Other Distributive Education. The remaining programs in the top ten in order are: Electronic Technology, Law Enforcement Training, Medical Emergency Technician, Accounting and Computing Occupations, Typing and Related Occupations, Steno/Secretarial and Related, Welding and Cutting and Programmers. Like the Secondary programs, business area programs were dominant in the top ten; however, four other areas were represented as well.

The ten highest enrollment programs accounted for 54% of all enrollments. The 74 programs with 100 or more enrolled accounted for 99% of all enrollments. Of the 28 programs with fewer than 100, five were in the medical area, and six were in agriculture. Possibly these were specialty programs that met the needs of a particular locale, or they may be programs that did not attract many students across the State. The 28 programs with fewer than 100 enrolled accounted for less than 1% of the total vocational post-secondary enrollment in 1982-83.

The total vocational program enrollment in community colleges in 1981-82 was 89,822. That figure dropped to 80,089 in 1982-83. Again, the fact that some cases were not reported affects the accuracy of the 1982-83 data and observations about the changes in program enrollments over the two-year period. Since the missing cases are for open-entry/open-exit, short-term and summer courses, they do not represent a random group of college programs.

The next table, Post-Secondary Vocational Certificates Reported in 1981-82 (Appendix D), displays the number of certificates reported by program, ranked from highest to lowest. Enrollment figures are for 1981-82 and only programs with enrollments are included on the Table. A total of 83 programs granted one certificate or more; 17 programs (17%) gave no certificates. Nine programs gave 100 or more certificates and the top 40 programs gave 95% of the certificates. The remaining 60 programs accounted for only 5% of all certificates granted.

The low completion rate may be evidence of the fact that many students who enroll in community college vocational courses/programs have a goal other than vocational program completion. Many are upgrading their job skills and take only a few classes until they have attained their goal. Some program areas like law enforcement, emergency medical technician, and computer-related areas have large numbers of students seeking inservice training. Some take only a few classes to develop enough skills to get a job. Others take vocational classes for leisure reasons or for self-enrichment. Since no data was available to analyze the goals of different students, it was not possible to use completion rates to make accurate judgments about the number of students who "succeeded" in attaining their goals. It should <u>not</u> be concluded, however, that the low completion rates indicated that the programs were not meeting the needs of students.

Another observation was that in some cases more students completed than were enrolled. This fact may represent an error in program coding or reporting. It may also have to do with the sequence in which a student takes classes in his major field.

The definition of what is meant by "certificate" varies among colleges and among programs. For some types of programs, a three-month certificate is awarded while in other program areas an Associate Degree is awarded. In some cases, within the same program area, different levels of skill are recognized with different types of certificates. Most of the cases used in this analysis were awarded

Associate Degrees; many other types of certificates are not reported. No attempt was made to analyze the various certificates and what they meant in this study, but it is important that differences be recognized since they represent varying levels of skill development and competence in program graduates.

Proprietary Schools

The first table in this section, Proprietary School Vocational Preparatory Enrollments (Appendix E), displays 1981-82 vocational program enrollments ranked on total enrollments. Data represents 8 1/2 months, not 12 months like the Secondary and Post-Secondary data. No information was available to determine how much larger the enrollments and completions would have been the remaining months had been included.

Of the total enrollment of 32,017, 77% were full-time students and 23% were part-time students. A total of 83 programs had enrollments of one or more; 38 programs had more than 100 enrollments. The 10 highest enrollment programs accounted for 59% of the total enrollments; programs with 100 or more enrolled accounted for 93% of all enrollments. Sixty (60) programs accounted for 98% of total enrollments.

Unlike the Secondary and Post-Secondary groups, no "Other" programs were in the top 10 programs. In fact, in the 40 highest enrollment programs the only two with "Other" designations were Other Metalworking Occupations and Electronics Occupations, Other. The 10 highest enrollment programs were Real Estate (by far the largest with 8,605 enrollments), Cosmetology, Bookkeepers, Programmers, Auto Mechanics, Medical Assistant, Power Plant (Aircraft) General Office Clerks, Drafting Occupations, and Welding and Cutting. It is interesting to note that most of the program titles used by the private school in coding their programs were very specific. Many were the job titles used for people working like executive secretary, bookkeeper, and programmer. Few such titles were used by the Secondary or Post-Secondary programs.

The specific program titles and coding are probably due to the fact that students who enroll in Proprietary schools do so because they have a desire to pursue a particular career goal. Consequently, they want programs that train them to work in a particular job and choose the training programs that target a given job. Since Proprietary schools must meet consumer demand in order to be successful, programs are well-defined and easy to classify into OE codes.

Of the 10 highest enrollment programs, 5 were in the trade and industrial area, 3 in business, one in medical and 1 in distributive education. Hence, the high enrollment program areas in the Proprietary schools were some different from the Secondary and Post-Secondary programs.

This data shows the areas in which students were preparing for eventual employment by enrolling in Proprietary schools. Coupled with program completion data, it could be used for planning and decision-making about the direction vocational education should take in order to meet the labor needs of business and industry.

The next analysis is displayed on the table Proprietary School Vocational Program Completions (Appendix F). It shows the number of program completions and enrollments reported for 1982-83. A total of 19,293 students completed while 32,017 were enrolled. The overall percentage of completion was 60%. All 83 programs with enrollment reported 1 or more completions. It should be noted that this data does not represent activity for a complete fiscal year. Therefore, the rate of completion might actually be higher if data for the entire fiscal year were available.

Five of the 83 programs showed the number of completers to be greater than the enrollees. That fact may be due reporting errors or to the date of enrollment and the duration of the program in relation to completion.

The 60% rate of completion reflects the goal-oriented type of student that selects a private vocational training school. Most students have an immediate career goal that is specific. In addition, the curriculum at most private vocational schools is clearly defined and directed toward program completion criteria. Another factor affecting completion rates is that the competitive nature of private school makes it necessary to eliminate programs that do not complete and place reasonable numbers of students. Retaining such programs would damage the credibility of the school and make attracting students difficult.

The definition of completion varies with the individual schools. Without knowing what level of skills a student who completes the program has, it is difficult to make meaningful observations about the skills these people will bring to the labor market.

Total Vocational Preparatory Programs

The next table, Total 1981-82 Vocational Preparatory Program Enrollments (Appendix G), displays Secondary, Post-Secondary, and Proprietary School vocational preparatory program enrollments for 1981-82 rank ordered by total enrollment. The total number of students enrolled was 154,393. Secondary enrollments accounted for 22%, Post-Secondary for 58%, and Proprietary schools for 20% of the total statewide vocational preparatory program enrollment.

A total of 149 programs had enrollments in 1981-82. Of those, 106 had 100 or more students enrolled; 43 had fewer than 100 enrollments. Thirty-eight (38) programs had more than 1,000 enrolled.

The ten highest enrollment programs in order are: Other Data Processing, Real Estate, Other D.E., Auto Mechanics, Other Office Occupations, Accounting/Computing Occupations, Electronic Technology, Other Trade and Industrial, Welding/Cutting, and Law Enforcement Training. In spite of the problems with the data, it is reasonable to conclude that these programs are providing trained people to enter the labor pool. The number of enrollments range from 12,238 for Other Data Processing to 4,373 for Drafting Occupations. Because of the large number of cases represented by this table, even though data errors may affect exact ranks to some extent, programs with large enrollments can be expected to provide a substantial number of people with skills in the respective program areas.

Total numbers of program completers are not included because of the limitations in the data explained earlier. If completion data were reliable, it would be the best predictor of the actual number of people who would be prepared to work in particular jobs.

It is interesting to note from this table, that in many instances those programs with high enrollment in the Proprietary schools have no enrollment or low enrollment in the Secondary and/or Post-Secondary programs. The reverse is also true. This observation illustrates that these providers of vocational education complement each other in offering a broad range of occupational training programs for students.

The next table, Matrix of High Enrollment Vocational Programs (Appendix H), displays a comparison of the high enrollment vocational programs in 1981-82 for Secondary, Post-Secondary, Proprietary schools, and the aggregated total vocational enrollment. The table was created by using the rank-ordered enrollments for 1981-82 for each group. The top 20% of programs with enrollment of one or more were selected for each group and plotted on the table. The program titles are in random order.

Observation shows that the emphasis is different among the three providers. Although some overlap exists, many of the high enrollment programs in the Proprietary schools are not provided at the Secondary or Post-Secondary levels. If program coding is accurate across the data, this information is helpful in examining the emphasis of each provider.

Chapter 6

RECOMMENDATIONS

Because of the problems with inconsistencies in the data, the original goal of this study could not be met. From the information gathered and analyzed, it is not possible to provide the type of information necessary for comprehensive vocational education program planning to meet the labor market needs of business and industry in Arizona. Nonetheless, this study was successful in locating data sources that can form the basis from which such information can be developed. Therefore, the recommendations suggest improvements that can be made within the framework of the existing system in order to gain the information and database necessary for meaningful long-range vocational education planning.

It is recommended that:

- The State Board of Directors for Community Colleges assume the responsibility to collect and report vocational enrollment for community colleges, as required for vocational federal funding, to the Arizona Department of Education.

- In conjunction with the State Board of Vocational Education, the State Board of Directors for Community Colleges develop a system to determine primary program goals of community college students and include that data on the vocational education enrollment tape format.

- The State Board of Directors for Community Colleges collect full-time student equivalency by program for inclusion in their Annual Report.

- The State Board of Education and the State Board of Diectors for Community Colleges adopt specific program definitions and CIP codes for their respective schools in order to establish consistent, standardized program coding. Changes in the definition of "completer" be made to coincide with student program goals, especially for community college students.

- All enrollments be reported in a code that clearly specifies the program title; reporting in the "Other" category should be eliminated.

- Efforts toward refining and improving the quality of the data collection system for vocational education be continued with increased monitoring and verification of reported information.

- New approaches be developed to speed the collection and compilation of vocational enrollment data so that it is rapidly available for planning purposes.

- Ongoing analysis of vocational enrollment and completion data be continued and improved.

BIBLIOGRAPHY

Bottoms, Gene, and Patricia Copa. "A Perspective on Vocational Education Today." Phi Delta Kappa, January, 1983.

Brown, Lawrence L., III, and Kevin J. Gilmartin. Measures of Participation in Vocational Education: Enrollments, Students and Exposure. Palo Alto, California: American Institutes of Research in the Behavioral Sciences, 1980 (ED 215229).

Brennan, Peggy, and Gail Robinson. The Student Accounting System: A Process for Tracking and Assessing the Flow of Students Through Vocational Education Programs. Sacramento, California: California Community Colleges, 1980 (ED 212844).

Campbell, Paul B., and others. Patterns of Participation in Secondary Vocational Education: A Report Based on Transcript and Interview Data of 1979 and 1980 National Longitudinal Survey of New Youth Cohorts. Washington, D.C.: Office of Vocational and Adult Education, 1981 (ED 209476).

Campbell, Paul B., and others. Postsecondary Experiences of Students with Varying Participation in Secondary School Vocational Education. Columbus, Ohio: National Center for Research in Vocational Education, 1982 (ED 215218).

Copa, George H., and Bruce A. Klenen. Job Selection Patterns: Link Between Vocational Education Programs and the Labor Market. Minneapolis, Minnesota: Minnesota Research Coordinating Unit for Vocational Education, University of Minnesota, 1977.

Gold, Ben K., and William Morris. Student Accountability Model (SAM) Operations Model. Sacramento, California: California Community Colleges, 1977 (ED 135443).

Golladay, Mary A., and Rolf M. Wulfsberg. The Condition of Vocational Education. Washington, D.C.: National Center for Education Statistics, 1981.

Hopkins, Charles O. Data Sources for Vocational Education Evaluation. Information Services No. 158. Columbus, Ohio: National Center for Research in Vocational Education, 1979.

Hunter, Russell, and Sheldon M. Stephen. Statewide Longitudinal Study: Report on Academic Year 1978-79, Part I, Fall Results. Woodland Hills, California: Pierce College, 1979 (ED 180530).

Illinois Public Community College Statewide Occupational Student Follow-up Longitudinal Study. Springfield, Illinois: Community College Board, 1980 (ED 169958).

Knoell, Dorothy M. Summary of the Final Report of the Statewide Longitudinal Study of Community College Students. Sacramento California State Postsecondary Education Commission, 1982 (ED 222209).

Morris, William, and others. SAM: Student Accountability Model Operations Manual, Third Revision. Sacramento, California: California Community Colleges, 1981 (ED 212815).

Sheldon, M. Stephen. "What Is a Vocational Student? Why VEDS is Inadequate." VocEd, September, 1983.

Woods, Elinor M. "National Longitudinal Studies and Data Sets," VocEd, September, 1980.

Appendix A

SECONDARY VOCATIONAL PREPARATORY PROGRAM ENROLLMENTS

Program Title	1981-82 Enrollment	1982-83 Enrollment
TYPING AND RELATED OCCUPATIONS	1,876	3,982
ACCOUNTING/COMPUTING OCCUPATIONS	1,727	3,295
OTHER OFFICE OCCUPATIONS	4,620	2,332
STENOGRAPHICAL/SECRETARIAL AND RELATED	1,746	2,276
OTHER	685	1,327
OTHER DISTR EDUCATION	1,191	1,309
AUTO MECHANICS	2,543	1,300
FILING/OFFICE MACHINES/GENERAL OFFICE	1,322	1,271
OTHER TRADE & INDUSTRY OCCUPATIONS	1,264	1,065
OTHER OCCUPATION PREPARATION FOR HOMEMAKING	1,158	1,032
PROGRAMMERS	553	1,008
OTHER BUSINESS DATA PROCESSING	928	835
GENERAL MERCHANDISE	624	770
SUPERVISORY & ADMINISTRATIVE MANAGEMENT	575	548
WELDING AND CUTTING	1,128	527
OTHER HEALTH OCCUPATIONS EDUCATION	747	433
AGRICULTURE PRODUCTION	363	370
OTHER AGRICULTURE	476	363
INFORMATION/COMMUNICATIONS OCCUPATIONS	195	339
OTHER CONSTRUCTION/MAINTENANCE	736	329
COMPUTER/CONSOLE OPERATOR	278	328
BODY AND FENDER REPAIR	390	291
AGRICULTURAL MECHANICS	256	281
ELECTRONICS OCCUPATIONS	767	279
COSMETOLOGY	750	272
CARPENTRY	615	253
FOOD MANAGEMENT/PRODUCTION/SERVICES	328	219
CARE/GUIDANCE OF CHILDREN	467	213
GRAPHIC ARTS OCCUPATIONS	379	164
PERSONNEL TRAINING & RELATED	179	163
HORTICULTURE	127	155
DRAFTING OCCUPATIONS	843	141
NURSING ASSISTANCE (AIDE)	168	131
MEDICAL ASSISTANT	18	131
COMMERCIAL ART OCCUPATIONS	275	127
OTHER RETAIL TRADES	122	125
QUANTITY FOOD OCCUPATIONS	161	112
AVIATION OCCUPATIONS	222	109
APPAREL/ACCESSORIES	196	102
UPHOLSTERING	181	101
MACHINE SHOP	236	100
PRACTICAL (VOC) NURSING	116	97
DIESEL MECHANIC	159	73
LAW ENFORCEMENT TRAINING	321	73

Appendix A (Continued)

Program Title	1981-82 Enrollment	1982-83 Enrollment
RENEWABLE NATURAL RESOURCES	118	71
ELECTRICITY	213	70
AIR CONDITIONING	94	69
WOODWORKING OCCUPATIONS	134	67
ADVERTISING SERVICES	73	61
CLOTHING MANAGEMENT/PRODUCTION/SERVICES	122	49
MASONRY	60	45
AGRICULTURAL SUPPLIES/SERVICES	71	40
FOOD SERVICES	51	40
PERSONAL SERVICES	81	36
TEXTILE PRODUCTION/FABRICATION	48	32
OTHER NURSING	70	28
COMMERCIAL PHOTOGRAPHY OCCUPATIONS	343	28
FINANCE AND CREDIT	35	26
RECREATION AND TOURISM	132	23
REAL ESTATE	55	17
HOME FURNISHING EQUIPMENT/SERVICES	89	15
SMALL ENGINE REPAIR	24	13
TRANSPORTATION	109	12
HOME FURNISHINGS	17	11
REHABILITATION	111	10
FLORISTRY	36	9
HOTEL AND LODGING	27	9
PLASTICS OCCUPATIONS	43	9
AUTOMOTIVE	41	8
INSTITUTE/HOME MANAGEMENT/SUPPLIES	27	8
PLUMBING/PIPEFITTING	33	8
DENTAL ASSISTING	63	7
MATERIALS SUPPORT OCCUPATIONS	38	7
INHALATION THERAPY	2	5
FOOD DISTRIBUTION	45	4
HARDWARE/BUILDING MATERIALS	12	4
INDUSTRIAL MARKETING	26	2
MARITIME OCCUPATIONS	26	2
APPLIANCE REPAIR	11	1
DENTAL HYGIENE/ASSOCIATE DEGREE	50	0
DENTAL LAB TECHNOLOGY	18	0
MEDICAL LAB ASSISTING	27	0
OTHER MEDICAL LAB TECHNOLOGY	9	0
NURSING/ASSOCIATE DEGREE	199	0
RADIOLOGIC TECHNICIAN (X-RAY)	25	0
MENTAL HEALTH TECHNICIAN	22	0
MEDICAL EMERGENCY TECHNICIAN	14	0
SHEET METAL	78	0
TOTAL	34,933	29,597

Appendix B

SECONDARY VOCATIONAL PREPARATORY PROGRAM COMPLETIONS

Program Title	1981-82 Enrollments	1982-83 Completers
OTHER	685	4,553
OTHER OFFICE OCCUPATIONS	4,620	2,449
OTHER TRADE & INDUSTRY OCCUPATIONS	1,264	1,222
AUTO MECHANICS	2,543	828
ACCOUNTING/COMPUTING OCCUPATIONS	1,727	665
OTHER OCCUPATION PREPARATION FOR HOMEMAKING	1,158	647
OTHER DISTR EDUCATION	1,191	623
STENOGRAPHICAL/SECRETARIAL AND RELATED	1,746	623
FILING/OFFICE MACHINES/GENERAL OFFICE	1,322	504
TYPING AND RELATED OCCUPATIONS	1,876	460
WELDING AND CUTTING	1,128	364
OTHER BUSINESS DATA PROCESSING	928	306
SUPERVISORY & ADMINISTRATIVE MANAGEMENT	575	294
OTHER HEALTH OCCUPATIONS EDUCATION	747	291
OTHER CONSTRUCTION/MAINTENANCE	736	274
ELECTRONICS OCCUPATIONS	767	268
COSMETOLOGY	750	267
OTHER AGRICULTURE	476	265
PROGRAMMERS	553	254
DRAFTING OCCUPATIONS	843	232
GENERAL MERCHANDISE	624	221
CARPENTRY	615	173
CARE/GUIDANCE OF CHILDREN	467	168
FOOD MANAGEMENT/PRODUCTION/SERVICES	328	164
AGRICULTURE PRODUCTION	363	155
LAW ENFORCEMENT TRAINING	321	135
COMPUTER/CONSOLE OPERATOR	278	131
GRAPHHIC ARTS OCCUPATIONS	379	128
BODY AND FENDER REPAIR	390	122
NURSING/ASSOCIATE DEGREE	199	97
APPAREL/ACCESSORIES	196	95
COMMERCIAL ART OCCUPATIONS	275	94
AGRICULTURAL MECHANICS	256	93
PERSONNEL TRAINING & RELATED	179	90
ELECTRICITY	213	86
COMMERCIAL PHOTOGRAPHY OCCUPATIONS	343	85
DIESEL MECHANIC	159	80
INFORMATION/COMMUNICATIONS OCCUPATIONS	195	78
AVIATION OCCUPATIONS	222	77
NURSING ASSISTANCE (AIDE)	168	72
QUANTITY FOOD OCCUPATIONS	161	62
MACHINE SHOP	236	60
CLOTHING MANAGEMENT/PRODUCTION/SERVICES	122	58
OTHER RETAIL TRADES	122	55

Appendix B (Continued)

Program Title	1981-82 Enrollments	1982-83 Completers
RECREATION AND TOURISM	132	50
TRANSPORTATION	109	46
REHABILITATION	111	46
UPHOLSTERING	181	44
HORTICULTURE	127	42
PRACTICAL (VOC) NURSING	116	42
HOME FURNISHING EQUIPMENT/SERVICES	89	41
OTHER NURSING	70	37
AIR CONDITIONING	94	37
RENEWABLE NATURAL RESOURCES	118	36
DENTAL ASSISTING	63	34
ADVERTISING SERVICES	73	33
WOODWORKING OCCUPATIONS	134	33
FOOD DISTRIBUTION	45	32
FOOD SERVICES	51	30
DENTAL HYGIENE/ASSOCIATE DEGREE	50	28
AGRICULTURAL SUPPLIES/SERVICES	71	27
PERSONAL SERVICES	81	26
MASONRY	60	25
REAL ESTATE	55	23
PLUMBING/PIPEFITTING	33	17
INDUSTRIAL MARKETING	26	16
INSTITUTE/HOME MANAGEMENT/SUPPLIES	27	16
AUTOMOTIVE	41	15
TEXTILE PRODUCTION/FABRICATION	48	15
HOTEL AND LODGING	27	14
MEDICAL LAB ASSISTING	27	14
MATERIALS SUPPORT OCCUPATIONS	38	14
SHEET METAL	78	13
FINANCE AND CREDIT	35	12
FLORISTRY	36	11
PLASTICS OCCUPATIONS	43	11
DENTAL LAB TECHNOLOGY	18	9
RADIOLOGIC TECHNICIAN (X-RAY)	25	8
HARDWARE/BUILDING MATERIALS	12	7
MENTAL HEALTH TECHNICIAN	22	7
MARITIME OCCUPATIONS	26	7
OTHER MEDICAL LAB TECHNOLOGY	9	6
APPLIANCE REPAIR	11	6
HOME FURNISHINGS	17	5
MEDICAL ASSISTANT	18	5
MEDICAL EMERGENCY TECHNICIAN	14	5
SMALL ENGINE REPAIR	24	5
INHALATION THERAPY	2	1
TOTAL	34,933	18,919

Appendix C

POST-SECONDARY VOCATIONAL PROGRAM ENROLLMENTS

Program Title	1981-82 Enrollment	1982-83 Enrollment*
OTHER BUSINESS DATA PROCESSING	11,310	13,990
OTHER DISTR EDUCATION	8,785	6,549
ELECTRONIC TECHNOLOGY	4,565	3,794
LAW ENFORCEMENT TRAINING	3,867	3,444
MEDICAL EMERGENCY TECHNICIAN	2,804	3,201
ACCOUNTING/COMPUTING OCCUPATIONS	3,524	3,122
TYPING AND RELATED OCCUPATIONS	2,192	2,692
STENOGRAPHICAL/SECRETARIAL AND RELATED	2,397	2,300
WELDING AND CUTTING	2,580	2,127
PROGRAMMERS	1,638	1,968
OTHER PUBLIC SERVICE OCCUPATIONS	2,350	1,947
OTHER HEALTH OCCUPATIONS EDUCATION	1,954	1,945
CARE/GUIDANCE OF CHILDREN	2,081	1,938
DRAFTING OCCUPATIONS	2,665	1,908
OTHER TRADE & INDUSTRY OCCUPATIONS	3,773	1,510
NURSING/ASSOCIATE DEGREE	1,497	1,438
FOOD MANAGEMENT/PRODUCTION/SERVICES	1,608	1,397
AUTO MECHANICS	1,632	1,355
REAL ESTATE	1,904	1,082
FIREMAN TRAINING	1,115	1,071
FINANCE AND CREDIT	1,504	1,053
OTHER CONSTRUCTION/MAINTENANCE	1,377	1,038
FILING/OFFICE MACHINES/GENERAL OFFICE	1,172	1,023
INFORMATION/COMMUNICATIONS OCCUPATIONS	1,239	1,020
OTHER NURSING	879	1,008
ADVERTISING SERVICES	1,205	885
SUPERVISORY & ADMINISTRATIVE MANAGEMENT	641	836
AIR CONDITIONING	948	708
OTHER TECHNICAL EDUCATION	943	705
ELECTRICAL OCCUPATIONS	800	642
AGRICULTURE PRODUCTION	695	537
ELECTRONICS OCCUPATIONS	621	483
MECHANICAL TECHNOLOGY	573	459
COMMERCIAL ART OCCUPATIONS	563	434
CARPENTRY	472	415
OTHER	563	411
HOME FURNISHING EQUIPMENT/SERVICES	458	404
CLOTHING MANAGEMENT/PRODUCTION/SERVICES	450	397
WOODWORKING OCCUPATIONS	568	395
ELECTRICITY	192	384
AUTO SPECIALIZATION	667	370

*This figure is missing some open/entry, open/exit, short-term and/or summer courses for the year (see page 9).

Appendix C (Continued)

Program Title	1981-82 Enrollment	1982-83 Enrollment*
GRAPHIC ARTS OCCUPATIONS	378	363
OTHER OFFICE OCCUPATIONS	670	361
COMMERCIAL PHOTOGRAPHY OCCUPATIONS	547	359
CIVIL TECHNOLOGY	395	349
OTHER MEDICAL LAB TECHNOLOGY	317	344
BODY AND FENDER REPAIR	376	330
PRACTICAL (VOC) NURSING	207	296
OTHER OCCUPATION PREPARATION FOR HOMEMAKING	328	290
POLICE SCIENCE TECHNOLOGY	290	282
PLUMBING/PIPEFITTING	381	269
SCIENTIFIC DATA PROCESSING	60	233
NURSING ASSISTANCE (AIDE)	369	215
HOTEL AND LODGING	197	203
ENVIRONMENTAL CONTROL TECHNICIAN	318	195
MACHINE SHOP	234	191
SHEET METAL	253	188
DIESEL MECHANIC	283	172
INHALATION THERAPY	179	170
HORTICULTURE	158	160
AVIATION OCCUPATIONS	177	158
RECREATION AND TOURISM	180	152
UPHOLSTERING	235	145
PERSONNEL TRAINING & RELATED	117	138
REFRIGERATION	86	134
MENTAL HEALTH TECHNICIAN	106	133
INSURANCE	169	130
TRANSPORTATION	194	129
STATIONARY ENERGY SOURCES	60	129
COMPUTER/CONSOLE OPERATOR	84	123
COMMERCIAL PILOT TRAINING	159	116
INDUSTRIAL TECHNOLOGY	156	110
GENERAL MERCHANDISE	184	104
FOOD SERVICES	68	100
SMALL ENGINE REPAIR	108	96
RADIOLOGIC TECHNICIAN (X-RAY)	89	82
RENEWABLE NATURAL RESOURCES	121	80
INDUSTRIAL MARKETING	42	63
OTHER AGRICULTURE	54	55
APPAREL/ACCESSORIES	48	46
DENTAL ASSISTING	61	45
DENTAL HYGIENE/ASSOCIATE DEGREE	43	45
FOREMANSHIP, SUPERVISORY/MANAGEMENT DEV.	17	45
ARCHITECTURAL TECHNOLOGY	0	40

*This figure is missing some open/entry, open/exit, short-term and/or summer courses for the year (see page 9).

Appendix C (Continued)

Program Title	1981-82 Enrollment	1982-83 Enrollment*
AUTOMOTIVE	34	37
OTHER RETAIL TRADES	67	36
MASONRY	38	34
DENTAL LAB TECHNOLOGY	31	30
AGRICULTURAL MECHANICS	33	25
AGRICULTURAL SUPPLIES/SERVICES	57	24
APPLIANCE REPAIR	0	24
COSMETOLOGY	0	21
FIRE/FIRE SAFETY TECHNICIAN	3	20
FORESTRY	28	17
MARITIME OCCUPATIONS	8	16
AUTOMOTIVE TECHNOLOGY	23	13
TOOL AND DIE MAKING	0	13
AGRICULTURAL PRODUCTS	3	8
MEDICAL LAB ASSISTING	25	8
INSTITUTE/HOME MANAGEMENT/SUPPLIES	10	8
ELECTRICAL TECHNOLOGY	0	1
OTHER METALWORKING OCCUPATIONS	25	1
WATER/WASTE WATER TECH.	143	0
MACHINE TOOL OPERATION	7	0
QUANTITY FOOD OCCUPATIONS	18	0
TOTAL	89,822	80,089

*This figure is missing some open/entry, open/exit, short-term and/or summer courses for the year (see page 9).

Appendix D

POST-SECONDARY VOCATIONAL CERTIFICATES REPORTED IN 1981-82

Program Title	1981-82 Enrollment	Number of Vocational Certificates Reported in 1981-82
MEDICAL EMERGENCY TECHNICIAN	2,804	533
NURSING/ASSOCIATE DEGREE	1,497	316
OTHER NURSING	879	255
PRACTICAL (VOC) NURSING	207	219
ELECTRONIC TECHNOLOGY	4,565	213
OTHER PUBLIC SERVICE OCCUPATIONS	2,350	188
SUPERVISORY & ADMINISTRATIVE MANAGEMENT	641	180
LAW ENFORCEMENT TRAINING	3,867	151
OTHER DISTR EDUCATION	8,785	135
DRAFTING OCCUPATIONS	2,665	89
OTHER BUSINESS DATA PROCESSING	11,310	75
STENOGRAPHICAL/SECRETARIAL & RELATED	2,397	74
OTHER HEALTH OCCUPATIONS EDUCATION	1,954	70
OTHER TRADE & INDUSTRY OCCUPATIONS	3,773	65
ACCOUNTING/COMPUTING OCCUPATIONS	3,524	59
FILING/OFFICE MACHINES/GENERAL OFFICE	1,172	54
OTHER	563	52
INHALATION THERAPY	179	49
WELDING AND CUTTING	2,580	49
OTHER TECHNICAL EDUCATION	943	47
DENTAL ASSISTING	61	45
PROGRAMMERS	1,638	40
POLICE SCIENCE TECHNOLOGY	290	40
OTHER CONSTRUCTION/MAINTENANCE	1,377	38
CARE/GUIDANCE OF CHILDREN	2,081	33
NURSING ASSISTANCE (AIDE)	369	30
AIR CONDITIONING	948	30
HOME FURNISHING EQUIPMENT/SERVICES	458	29
INDUSTRIAL TECHNOLOGY	156	27
TYPING AND RELATED OCCUPATIONS	2,192	24
AUTO SPECIALIZATION	667	24
OTHER MEDICAL LAB TECHNOLOGY	317	22
AGRICULTURE PRODUCTION	695	21
RADIOLOGIC TECHNICIAN (X-RAY)	89	21
DENTAL HYGIENE/ASSOCIATE DEGREE	43	20
COMMERCIAL ART OCCUPATIONS	563	19
FIREMAN TRAINING	1,115	18
FINANCE AND CREDIT	1,504	17
DIESEL MECHANIC	283	16
ELECTRONICS OCCUPATIONS	621	16
REAL ESTATE	1,904	12
CLOTHING MANAGEMENT/PRODUCTION/SERVICES	450	11
GRAPHIC ARTS OCCUPATIONS	378	11

Appendix D (Continued)

Program Title	1981-82 Enrollment	Number of Vocational Certificates Reported in 1981-82
HOTEL AND LODGING	197	10
MENTAL HEALTH TECHNICIAN	106	10
AUTO MECHANICS	1,632	10
GENERAL MERCHANDISE	184	9
INFORMATION/COMMUNICATIONS OCCUPATIONS	1,239	8
OTHER OFFICE OCCUPATIONS	670	8
ELECTRICAL OCCUPATIONS	800	8
OTHER OCCUPATION PREP FOR HOMEMAKING	328	7
APPAREL/ACCESSORIES	48	6
CIVIL TECHNOLOGY	395	6
FIRE/FIRE SAFETY TECHNICIAN	3	6
BODY AND FENDER REPAIR	376	5
COMMERCIAL PHOTOGRAPHY OCCUPATIONS	547	5
HORTICULTURE	158	4
FOOD MANAGEMENT/PRODUCTION/SERVICES	1,608	4
AUTOMOTIVE TECHNOLOGY	23	4
ENVIRONMENTAL CONTROL TECHNICIAN	318	4
RENEWABLE NATURAL RESOURCES	121	3
ADVERTISING SERVICES	1,205	3
ELECTRICITY	192	3
MACHINE TOOL OPERATION	7	3
STATIONARY ENERGY SOURCES	60	3
FORESTRY	28	2
COMPUTER/CONSOLE OPERATOR	84	2
MECHANICAL TECHNOLOGY	573	2
MACHINE SHOP	234	2
SMALL ENGINE REPAIR	108	2
AGRICULTURAL SUPPLIES/SERVICES	57	1
OTHER AGRICULTURE	54	1
AUTOMOTIVE	34	1
FOOD SERVICES	68	1
TRANSPORTATION	194	1
INSTITUTE/HOME MANAGEMENT/SUPPLIES	10	1
OTHER METALWORKING OCCUPATIONS	25	1
AGRICULTURAL MECHANICS	33	0
AGRICULTURAL PRODUCTS	3	0
INDUSTRIAL MARKETING	42	0
INSURANCE	169	0
RECREATION AND TOURISM	180	0
OTHER RETAIL TRADES	67	0
DENTAL LAB TECHNOLOGY	31	0
MEDICAL LAB ASSISTING	25	0
PERSONNEL TRAINING & RELATED	117	0
SCIENTIFIC DATA PROCESSING	60	0
COMMERCIAL PILOT TRAINING	159	0

Appendix D (Continued)

Program Title	1981-82 Enrollment	Number of Vocational Certificates Reported in 1981-82
WATER/WASTE WATER TECHNICIAN	943	0
AVIATION OCCUPATIONS	177	0
CARPENTRY	472	0
MASONRY	38	0
PLUMBING/PIPEFITTING	381	0
FOREMANSHIP, SUPERVISORY/MANAGEMENT DEV.	17	0
MARITIME OCCUPATIONS	8	0
SHEET METAL	253	0
QUANTITY FOOD OCCUPATIONS	18	0
REFRIGERATION	86	0
UPHOLSTERING	235	0
WOODWORKING OCCUPATIONS	568	0
TOTAL	90,622	3,583

Appendix E

PROPRIETARY SCHOOL VOCATIONAL PREPARATORY ENROLLMENTS

Program Title	Full-Time Enrollment	Part-Time Enrollment	Total Enrollment*
REAL ESTATE	4,903	3,702	8,605
COSMETOLOGY	1,917	42	1,959
BOOKKEEPERS	124	1,262	1,386
PROGRAMMERS	1,197	81	1,278
AUTO MECHANICS	1,203	3	1,206
MEDICAL ASSISTANT	1,032	0	1,032
POWER PLANT (AIRCRAFT)	432	585	1,017
GENERAL OFFICE CLERKS	796	72	868
DRAFTING OCCUPATIONS	853	12	865
WELDING AND CUTTING	751	71	822
NURSING ASSISTANCE (AIDE)	508	190	698
DIESEL MECHANIC	665	0	665
SECRETARIES	607	10	617
TRANSPORTATION	519	58	577
COOLING	487	82	569
ACCOUNTANTS	515	7	522
FOOD SERVICES	480	18	498
ELECTRONIC TECHNOLOGY	494	4	498
ELECTRONICS OCCUPATIONS	357	127	484
PERIPHERAL EQUIPMENT OPERATORS	412	41	453
INSURANCE	430	0	430
COMMERCIAL PILOT TRAINING	206	211	417
TELLERS	314	100	414
DENTAL ASSISTING	403	0	403
ADVERTISING SERVICES	140	226	366
STENOGRAPHERS	321	15	336
INHALATION THERAPY	323	0	323
AIR CONDITIONING	321	0	321
OTHER METALWORKING OCCUPATIONS	298	0	298
TYPISTS	250	0	250
ADMINISTRATIVE ASSISTANTS	203	4	207
HEAVY EQUIPMENT (CONSTRUCTION)	87	120	207
COMMUNICATIONS	159	15	174
AUTOMOTIVE SERVICES	164	0	164
PRACTICAL (VOC) NURSING	123	38	161
OTHER ELECTRONICS OCCUPATIONS	156	0	156
APPAREL/ACCESSORIES	141	0	141
RADIO/TELEVISION	128	0	128
MACHINE SHOP	75	36	111
PERSONNEL TRAINING & RELATED	103	4	107
CONSTRUCTION & MAINTENANCE TRADES	103	0	103
FINANCE AND CREDIT	100	2	102

*Data for the period 08/01/81 - 04/15/82 only.

Appendix E (Continued)

Program Title	Full-Time Enrollment	Part-Time Enrollment	Total Enrollment*
AIRCRAFT MAINTENANCE	91	6	97
CLERK TYPISTS	93	2	95
EXECUTIVE SECRETARY	94	0	94
WAITER/WAITRESS	69	15	84
SMALL ENGINE REPAIR	84	0	84
OTHER AGRICULTURE	79	0	79
LAW ENFORCEMENT TRAINING	0	78	78
MEAT CUTTER	38	40	78
BODY AND FENDER REPAIR	75	1	76
PERSONAL SERVICES	71	0	71
BARBERING	56	14	70
OTHER OFFICE OCCUPATIONS	67	0	67
COMMERCIAL ART OCCUPATIONS	67	0	67
CARPENTRY	60	0	60
ELECTRICITY	60	0	60
MASONRY	60	0	60
INDUSTRIAL MARKETING	0	57	57
FLORISTRY	56	0	56
SURGICAL TECHNICIAN	52	0	52
RADIOLOGIC TECHNICIAN (X-RAY)	52	0	52
CIVIL TECHNOLOGY	51	0	51
ARCHITECTURAL TECHNOLOGY	50	0	50
CASHIERS	48	1	49
SUPERVISORY & ADM. MANAGEMENT	49	0	49
INTERIOR DECORATING	48	0	48
OTHER PERSONAL SERVICES	39	3	42
COMPUTER/CONSOLE OPERATOR	32	2	34
AUTO SPECIALIZATION	32	0	32
PLUMBING/PIPEFITTING	30	0	30
ACCOUNTING/COMPUTING OCCUPATIONS	29	0	29
PRINTING PRESS OCCUPATIONS	28	0	28
GENERAL MERCHANDISE	27	0	27
BUSINESS MACHINE MAINTENANCE	26	0	26
APPLIANCE REPAIR	23	0	23
PAINTING AND DECORATING	22	0	22
PLASTERING	22	0	22
DENTAL LAB TECHNOLOGY	15	0	15
COMMERICAL PHOTOGRAPHY OCCUPATIONS	0	15	15
OCCUPATION HOME EC EDUC PREPARATION	10	2	12
METAL TRADES (COMBINED)	12	0	12
NURSING/ASSOCIATE DEGREE	10	0	10
FILING/OFFICE MACHINES/GEN CLERICAL	7	0	7
AUTOMOTIVE	4	0	4

*Data for the period 08/01/81 - 04/15/82 only.

Appendix E (Continued)

Program Title	Full-Time Enrollment	Part-Time Enrollment	Total Enrollment*
LINEWORKER	3	0	3
MEDICAL LAB ASSISTING	2	0	2
TOTAL	24,643	7,374	32,017

*Data for the period 08/01/81 - 04/15/82 only.

Appendix F

PROPRIETARY SCHOOL VOCATIONAL PROGRAM COMPLETIONS

Program Title	1981-82 Total Enrollments*	1982-83 Completers
REAL ESTATE	8,605	5,336
COSMETOLOGY	1,959	1,152
BOOKKEEPERS	1,386	979
NURSING ASSISTANCE (AIDE)	698	702
AUTO MECHANICS	1,206	636
POWER PLANT (AIRCRAFT)	1,017	606
PROGRAMMERS	1,278	572
MEDICAL ASSISTANT	1,032	493
TRANSPORTATION	577	493
GENERAL OFFICE CLERKS	868	475
WELDING AND CUTTING	822	461
FOOD SERVICES	498	450
INSURANCE	430	430
TELLERS	414	412
DIESEL MECHANIC	665	392
DRAFTING OCCUPATIONS	865	392
ELECTRONICS OCCUPATIONS	484	381
COOLING	569	369
ADVERTISING SERVICES	366	328
COMMERCIAL PILOT TRAINING	417	303
SECRETARIES	617	236
AIR CONDITIONING	321	216
DENTAL ASSISTING	403	207
HEAVY EQUIPMENT (CONSTRUCTION)	207	190
PERIPHERAL EQUIPMENT OPERATORS	453	187
ELECTRONIC TECHNOLOGY	498	175
ACCOUNTANTS	522	174
INHALATION THERAPY	323	162
OTHER METALWORKING OCCUPATIONS	298	160
TYPISTS	250	128
COMMUNICATIONS	174	126
AIRCRAFT MAINTENANCE	97	106
RADIO/TELEVISION	128	105
ADMINISTRATIVE ASSISTANTS	207	104
CONSTRUCTION & MAINTENANCE TRADES	103	102
FINANCE AND CREDIT	102	100
STENOGRAPHERS	336	90
OTHER AGRICULTURE	79	83
PRACTICAL (VOC) NURSING	161	78
AUTOMOTIVE SERVICES	164	77
OTHER ELECTRONICS OCCUPATIONS	156	67
AUTO SPECIALIZATION	32	66

*Data for the period 08/01/81 - 04/15/82 only.

Appendix F (Continued)

Program Title	1981-82 Total Enrollments*	1982-83 Completers
MACHINE SHOP	111	65
EXECUTIVE SECRETARY	94	58
FLORISTRY	56	56
BARBERING	70	55
WAITER/WAITRESS	84	51
INDUSTRIAL MARKETING	57	42
LAW ENFORCEMENT TRAINING	78	40
MEAT CUTTER	78	39
CASHIERS	49	34
CIVIL TECHNOLOGY	51	32
MASONRY	60	31
RADIOLOGIC TECHNICIAN (X-RAY)	52	30
CLERK TYPISTS	95	29
SURGICAL TECHNICIAN	52	28
PERSONNEL TRAINING & RELATED	107	28
BUSINESS MACHINE MAINTENANCE	26	26
APPAREL/ACCESSORIES	141	25
PERSONAL SERVICES	71	25
COMMERICAL PHOTOGRAPHY OCCUPATIONS	15	25
BODY AND FENDER REPAIR	76	23
CARPENTRY	60	23
ARCHITECTURAL TECHNOLOGY	50	22
ACCOUNTING/COMPUTING OCCUPATIONS	29	20
PRINTING PRESS OCCUPATIONS	28	20
ELECTRICITY	60	19
OTHER PERSONAL SERVICES	42	17
PLASTERING	22	16
COMPUTER/CONSOLE OPERATOR	34	15
COMMERCIAL ART OCCUPATIONS	67	15
PAINTING AND DECORATING	22	14
OCCUPATION HOME EC EDUC PREPARATION	12	12
OTHER OFFICE OCCUPATIONS	67	12
INTERIOR DECORATING	48	10
AUTOMOTIVE	4	9
GENERAL MERCHANDISE	27	5
DENTAL LAB TECHNOLOGY	15	5
SMALL ENGINE REPAIR	84	5
METAL TRADES (COMBINED)	12	4
MEDICAL LAB ASSISTING	2	2
FILING/OFFICE MACHINES/GEN CLERICAL	7	1
PLUMBING/PIPEFITTING	30	1
NURSING/ASSOCIATE DEGREE	10	0
SUPERVISORY & ADM. MANAGEMENT	49	0

*Data for the period 08/01/81 - 04/15/82 only.

Appendix F (Continued)

Program Title	1981-82 Total Enrollments*	1982-83 Completers
APPLIANCE REPAIR	23	0
LINEWORKER	3	0
TOTAL	32,017	19,293

*Data for the period 08/01/81 - 04/15/82 only.

Appendix G

TOTAL 1981-82 VOCATIONAL PREPARATORY PROGRAM ENROLLMENTS

Program Title	Secondary Enrollment	Post-Secondary Enrollment	Proprietary Enrollment*	Total Enrollment**
OTHER DATA PROCESSING	928	11,310	0	12,238
REAL ESTATE	55	1,904	8,605	10,564
OTHER DISTR EDUCATION	1,191	8,875	0	9,976
AUTO MECHANICS	2,543	1,632	1,206	5,381
OTHER OFFICE OCCUPS	4,620	670	67	5,357
ACCTG/COMPUTER OCCUPS	1,727	3,524	29	5,280
ELECTRONIC TECHNOLOGY	0	4,565	498	5,063
OTHER TRADE & INDUSTRY	1,264	3,773	0	5,037
WELDING/CUTTING	1,128	2,580	822	4,530
DRAFTING OCCUPATIONS	843	2,665	865	4,373
LAW ENFORCEMENT TRNG	321	3,867	78	4,266
STENO/SECRETARIAL & REL	1,746	2,397	0	4,143
TYPING/RELATED OCCUPS	1,876	2,192	0	4,068
PROGRAMMERS	553	1,638	1,278	3,469
MEDICAL EMERGENCY TECH	14	2,804	0	2,818
COSMETOLOGY	750	0	1,959	2,709
OTHER HEALTH OCCUPATIONS	747	1,954	0	2,701
CARE/GUIDANCE - CHILDREN	467	2,081	0	2,548
FILING/OFFICE MACHINES	1,322	1,172	0	2,494
OTHER PUBLIC SERVICE	0	2,350	0	2,350
OTHER CONSTRUCTION/MAINT	736	1,377	0	2,113
FOOD MGT/PRODUCTION/SERV	328	1,608	0	1,936
ELECTRONICS OCCUPATIONS	767	621	484	1,872
NURSING/ASSOCIATE DEGREE	199	1,497	10	1,706
ADVERTISING SERVICES	73	1,205	366	1,644
FINANCE/CREDIT	35	1,504	102	1,641
OTHER PREP HOMEMAKING	1,158	328	0	1,486
INFO/COMM OCCUPATIONS	195	1,239	0	1,434
BOOKKEEPERS	0	0	1,386	1,386
AIR CONDITIONING	94	948	321	1,363
SUPV & ADM MANAGEMENT	575	641	49	1,265
OTHER	685	563	0	1,248
NURSING ASST (AIDE)	168	369	698	1,235
CARPENTRY	615	472	60	1,147
FIREMAN TRAINING	0	1,115	0	1,115
DIESEL MECHANIC	159	283	665	1,107
AGRICULTURE PRODUCTION	363	695	0	1,058
MEDICAL ASSISTANT	18	0	1,032	1,050
POWER PLANT (AIRCRAFT)	0	0	1,017	1,017
OTHER NURSING	70	879	0	949
OTHER TECH EDUCATION	0	943	0	943

*Data only for the period of 08/01/81 - 04/15/82.
**May include some duplicated counts due to contract instruction.

Appendix G (Continued)

Program Title	Secondary Enrollment	Post-Secondary Enrollment	Proprietary Enrollment*	Total Enrollment**
COMMERCIAL ART OCCUPS	275	563	67	905
COMMERCIAL PHOTOGRAPHY	343	547	0	890
TRANSPORTATION	109	194	577	880
GENERAL OFFICE CLERKS	0	0	868	868
BODY/FENDER REPAIR	390	376	76	842
GENERAL MERCHANDISE	624	184	27	835
ELECTRICAL OCCUPATIONS	0	800	0	800
GRAPHIC ARTS OCCUPS	379	378	0	757
WOODWORKING OCCUPATIONS	134	568	0	702
AUTO SPECIALIZATION	0	667	32	699
FOOD SERVICES	51	68	498	617
SECRETARIES	0	0	617	617
OTHER AGRICULTURE	476	54	79	609
INSURANCE	0	169	430	599
MACHINE SHOP	236	234	111	581
COMMERCIAL PILOT TRNG	0	159	417	576
MECHANICAL TECHNOLOGY	0	573	0	573
CLOTHING MGT/PROD/SERV	122	450	0	572
COOLING	0	0	569	569
HOME FURN EQUIP/SERV	89	458	0	547
DENTAL ASSISTING	63	61	403	527
ACCOUNTANTS	0	0	522	522
INHALATION THERAPY	2	179	323	504
PRACTICAL NURSING	116	207	161	484
ELECTRICITY	213	192	60	465
PERIPHERAL EQUIPMENT	0	0	453	453
CIVIL TECHNOLOGY	0	395	51	446
PLUMBING/PIPEFITTING	33	381	30	444
UPHOLSTERING	181	235	0	416
TELLERS	0	0	414	414
PERSONAL TRNG/RELATED	179	117	107	403
AVIATION OCCUPATIONS	222	177	0	399
COMPUTER/CONSOLE OPRS	278	84	34	396
APPAREL/ACCESSORIES	196	48	141	385
STENOGRAPHERS	0	0	336	336
SHEET METAL	78	253	0	331
OTHER MEDICAL LAB TECH	9	317	0	326
OTHER METALWORKING	0	25	298	323
ENVIRONMENTAL CONTROL	0	318	0	318
RECREATION/TOURISM	132	180	0	312
POLICE SCIENCE TECH	0	290	0	290
AGRICULTURAL MECHANICS	256	33	0	289
HORTICULTURE	127	158	0	285

*Data only for the period of 08/01/81 - 04/15/82.
**May include some duplicated counts due to contract instruction.

Appendix G (Continued)

Program Title	Secondary Enrollment	Post-Secondary Enrollment	Proprietary Enrollment*	Total Enrollment**
TYPISTS	0	0	250	250
RENEWABLE NATURAL RES	118	121	0	239
HOTEL/LODGING	27	197	0	224
SMALL ENGINE REPAIR	24	108	84	216
ADMINISTRATIVE ASSTS	0	0	207	207
HEAVY EQUIPMENT (CONST)	0	0	207	207
OTHER RETAIL TRADES	122	67	0	189
QUANTITY FOODS	161	18	0	179
COMMUNICATIONS	0	0	174	174
RADIOLOGY TECH (X-RAY)	25	89	52	166
AUTOMOTIVE SERVICES	0	0	164	164
MASONRY	60	38	60	158
INDUSTRIAL TECHNOLOGY	0	156	0	156
OTHER ELECTRONICS OCCUPS	0	0	156	156
PERSONAL SERVICES	81	0	71	152
WATER/WASTE WATER TECH	0	143	0	143
AGRICULTURAL SUPP/SERVS	71	57	0	128
MENTAL HEALTH TECHNICIAN	22	106	0	128
RADIO/TELEVISION	0	0	128	128
INDUSTRIAL MARKETING	26	42	57	125
REHABILITATION	111	0	0	111
CONST & MAINT TRADES	0	0	103	103
AIRCRAFT MAINTENANCE	0	0	97	97
CLERK TYPISTS	0	0	95	95
EXECUTIVE SECRETARY	0	0	94	94
DENTAL HYGIENE/ASSOC DEG	50	43	0	93
FLORISTRY	36	0	56	92
REFRIGERATION	0	86	0	86
WAITER/WAITRESS	0	0	84	84
AUTOMOTIVE	41	34	4	79
MEAT CUTTER	0	0	78	78
BARBERING	0	0	70	70
DENTAL LAB TECHNOLOGY	18	31	15	64
SCIENTIFIC DATA PROC	0	60	0	60
STATIONARY ENERGY SOURC	0	60	0	60
MEDICAL LAB ASSISTING	27	25	2	54
SURGICAL TECHNICIAN	0	0	52	52
ARCHITECTURAL TECHNOLOGY	0	0	50	50
CASHIERS	0	0	49	49
INTERIOR DECORATOR	0	0	48	48
TEXTILE PRODUCTION	48	0	0	48
FOOD DISTRIBUTION	45	0	0	45
PLASTICS OCCUPATIONS	43	0	0	43

*Data only for the period of 08/01/81 - 04/15/82.
**May include some duplicated counts due to contract instruction.

Appendix G (Continued)

Program Title	Secondary Enrollment	Post-Secondary Enrollment	Proprietary Enrollment*	Total Enrollment**
OTHER PERSONAL SERVICES	0	0	42	42
MATERIALS SUPPORT OCCUPS	38	0	0	38
INSTITUTE/HOME MANAGEMNT	27	10	0	37
APPLIANCE REPAIR	11	0	23	34
MARITIME OCCUPATIONS	26	8	0	34
FORESTRY	0	28	0	28
PRINTING PRESS OCCUPS	0	0	28	28
BUSINESS MACHINE MAINT	0	0	26	26
AUTOMOTIVE TECHNOLOGY	0	23	0	23
PAINTING/DECORATING	0	0	22	22
PLASTERING	0	0	22	22
HOME FURNISHING	17	0	0	17
FOREMANSHIP	0	17	0	17
COMMERCIAL PHOTOGRAPHY	0	0	15	15
HARDWARE/BUILDING MAT	12	0	0	12
METAL TRADES	0	0	12	12
OCCUPATION HOME EC ED	0	0	12	12
FILING/GENERAL CLERICAL	0	0	7	7
MACHINE TOOL OPERATION	0	7	0	7
AGRICULTURAL PRODUCTS	0	3	0	3
FIRE/FIRE SAFETY	0	3	0	3
LINEWORKER	0	0	3	3
TOTAL	34,933	89,822	32,017	156,772

*Data only for the period of 08/01/81 - 04/15/82.
**May include some duplicated counts due to contract instruction.

Appendix H

MATRIX OF HIGH ENROLLMENT VOCATIONAL PROGRAMS

Vocational Program	Secondary	Post-Secondary	Proprietary	Total
Typing/Related	X	X		X
Accounting/Computing	X	X		X
Other Office Occupations	X			X
Steno/Secretarial Related	X	X		X
Other Distr Education	X	X		X
Auto Mechanics	X	X	X	X
Filing/Office Machines/ General Office	X			X
Other Trade & Industry	X	X		X
Other Occupation Preparation for Homemaking	X			X
Programmers		X	X	X
Drafting Occupations	X	X	X	X
Other Business Data Processing	X	X		X
General Merchandise	X			
Electronics Occupations	X			X
Other Construction Maintenance	X	X		X
Other	X			
Electronics Technology		X		X
Law Enforcement		X		X
Medical Emergency Technician		X		X
Welding/Cutting	X	X	X	X
Other Public Service		X		X
Other Health Occupations	X	X		X
Care/Guidance of Children		X		X
Nursing (Associate Degree)		X		X
Food Management/ Production/Service		X		X
Finance/Credit		X		X
Real Estate		X	X	X
Cosmetology	X		X	X
Bookkeepers			X	X
Medical Assistants			X	
Power Plant (Aircraft)			X	
General Office Clerks			X	
Nursing Assistance			X	
Diesel Mechanics			X	
Secretaries			X	
Transportation			X	
Cooling			X	
Accountants			X	
Advertising Services				X

Appendix H (Continued)

Vocational Program	Secondary	Post-Secondary	Proprietary	Total
Information/Communications Occupations				X
Air Conditioning				X

NOTE: PROGRAMS USED REPRESENT THE TOP 20% IN EACH GROUP. PROGRAMS ARE LISTED IN RANDOM ORDER.

Appendix I

TASK FORCE 1995 MEMBERS

Mr. Harold Arp

Mr. Eddie Basha

Mr. Eugene L. Dorr

Mr. George Evans

Mr. Robert E. Gocke

Mr. Harry Hollack

Dr. Eugene Hughes

Mr. John F. Kearney

Mr. Alex N. Nader

Mr. Bill Orr

Mr. G. M. Sollenberger

Mr. Peter Steen

Mr. Don Strauch

Mr. Jack Whiteman

TECHNICAL REVIEW COMMITTEE MEMBERS

Mr. John P. Durbin

Mr. Phillip W. Gagle

Ms. Kathryn Kilroy

Mr. Manuel D. Martinez